

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

1                   1.       (Currently amended): In a digital signal processor (DSP), a method for  
2 motion detection in a current frame of video information, comprising:  
3                   providing a search window which defines a search area of data points of said  
4 current frame, said search window defining a pattern of search points located in said current  
5 frame;  
6                   loading a reference block into a first memory portion of said DSP;  
7                   loading ~~at least~~ a first frame portion of said search area into a second memory  
8 portion of said DSP, said first frame portion ~~including at least some~~ being a subset of said search  
9 points;  
10                  determining a first level search point including performing comparisons of said  
11 reference block with search points in said first frame portion;  
12                  selectively loading a second frame portion of said search area into a third memory  
13 portion of said DSP based on a location of said first level search point; and  
14                  performing a local search relative to said first level search point,  
15                  wherein the first, second, and third memory portions are portions of an on-chip  
16 memory of said DSP.

1                   2.       (Original): The method of claim 1 wherein said determining further  
2 includes performing a comparison of said reference block with at least one search point that is  
3 stored in a memory that is external to said DSP.

1                   3.       (Original): The method of claim 1 wherein said local search includes  
2 providing a second search window centered about said first level search point, said second search  
3 window defining a refined search area contained within said search area of said current frame.

1                   4.     (Original): The method of claim 3 wherein said loading a second frame  
2     portion is performed if said refined search area includes data points not contained in said first  
3     frame portion.

5.     (Canceled)

1                   6.     (Original): The method of claim 1 wherein said third memory portion is  
2     contained within said second memory portion.

Q5 1                   7.     (Original): The method of claim 1 wherein said performing comparisons  
2     includes producing motion vectors.

1                   8.     (Original): The method of claim 7 wherein said first level search point is  
2     determined based on said motion vectors.

1                   9.     (Original): The method of claim 1 wherein said performing comparisons  
2     include calculating sum of absolute difference values.

1                   10.    (Original): The method of claim 1 wherein the entirety of said search area  
2     is loaded into said second memory portion.

1                   11.    (Currently amended): A method for video compression by comparing a  
2     first frame of video information against a second frame of video information, comprising:  
3                   identifying a reference ~~frame~~block contained in said first frame;  
4                   storing said second frame in a first memory;  
5                   defining a search area in said second frame, said search area comprising data  
6     points in said second frame, said search area including plural search points;  
7                   storing ~~at least a portion~~said reference block and a subset of said search area into  
8     a second memory, including one or more of said search points;  
9                   comparing said reference block to search points contained in said second  
10    memory;

11 determining a first level search point based at least on said step of comparing;  
12 defining a refined search area centered about said first level search point, said  
13 refined search area being contained in said search area; and  
14 performing a local search on said refined search area,  
15 said second memory being an on-chip memory of a digital signal processor,  
16 said first memory being a memory that is external to said digital signal processor.

1 12. (Original): The method of claim 11 wherein said performing a local  
2 search includes selectively loading data comprising said refined search area into said second  
3 memory.

1 13. (Original): The method of claim 12 wherein said step of selectively  
2 loading data is performed if said refined search area includes locations not contained in said first  
3 frame portion.

1 14. (Original): The method of claim 11 further including an additional step of  
2 comparing said reference block to search points which are contained in said first memory and  
3 which are not contained in said second memory, said determining further based on said  
4 additional step of comparing.

15 - 16. (Canceled)

1 17. (Original): The method of claim 11 wherein said comparing includes  
2 producing motions vectors and said first level search point is determined based on said motion  
3 vectors.

1 18. (Original): The method of claim 11 wherein said comparing includes  
2 calculating sum of absolute difference values.

1 19. (Original): The method of claim 11 wherein the entirety of said search  
2 area is stored in said second memory.

1                   20. (Currently amended): In a digital video image compression system, a  
2 device for estimating motion, comprising:  
3                   a processor;  
4                   a first memory coupled to said processor for storing a current frame; and  
5                   a second memory coupled to said processor, wherein said second memory stores a  
6 sequence of instructions which, when executed by said processor, cause said processor to  
7 perform steps of:

8                   (i) accessing a search window which defines a search area in said current  
9 frame, said search window defining a pattern of search points in said current frame;

10                   (ii) loading a reference block into a first memory portion of said DSP;

11                   (iii) loading ~~at least~~ a first frame portion of said search area into a second  
12 memory portion of said DSP, said first frame portion ~~including at least some~~ being a  
13 subset of said search points;

14                   (iv) determining a first level search point including performing  
15 comparisons of said reference block with search points in said first frame portion;

16                   (v) selectively loading a second frame portion of said search area into a  
17 third memory portion of said DSP based on the location of said first level search point;  
18 and

19                   (vi) performing a local search about said first level search point,

20                   wherein said first memory is external to said DSP,

21                   wherein said second memory is on-chip memory contained in said DSP.

21 - 22. (Canceled)

1                   23. (Original): The device of claim 20 wherein said step (iv) further includes  
2 performing a comparison of said reference block with at least one search point that is stored in  
3 said first memory.

24. (Canceled)

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25. (Original): The device of claim 20 wherein said performing comparisons

includes producing motion vectors and said first level search point is determined based on said

motion vectors.

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